

CLAIMS

What is claimed is:

1. (Currently amended) An adhesive compound comprising:
an adhesive base material;
a plurality of shape memory alloy (SMA) particles dispersed within said adhesive base material to improve an impact resistance of said adhesive base material; and
said SMA particles being provided in an austenitic phase; and
wherein a stress induced phase change of said SMA particles is used to improve said impact strength.
2. (Previously presented) The adhesive compound of claim 1, wherein said SMA particles comprise nickel-titanium alloy particles.
3. (Cancelled)
4. (Cancelled)
5. (Previously presented) The adhesive compound of claim 2, wherein said nickel-titanium alloy particles comprise a shape in accordance with at least one of the group of shapes comprising: a sphere; an oval; a cylinder.

6. (Previously presented) The adhesive compound of claim 2, wherein said nickel-titanium alloy particles comprise granules randomly interspersed within said adhesive base material.

7. (Original) The adhesive compound of claim 1, wherein said SMA particles comprise about 1.0% by volume of said adhesive base material.

8. (Original) The adhesive compound of claim 1, wherein said SMA particles comprise between about 1.0% and about 50% by volume of said adhesive base material.

9. (Original) The adhesive compound of claim 1, wherein said adhesive base material comprises a film, and said adhesive compound comprises an adhesive film.

10. (Original) The adhesive compound of claim 1, wherein said adhesive base material comprises an adhesive paste.

11. (Original) The adhesive compound of claim 1, wherein said SMA particles comprise a diameter of between about 50 microns and about .005 microns.

12. (Original) The adhesive compound of claim 1, wherein a size of said SMA particles comprises at least about 50 microns.

13. (Original) The adhesive compound of claim 1, wherein a size of said SMA particles comprises no more than about 0.005 micron.

14. (Currently Amended) An adhesive film comprising:
an adhesive base film;
a plurality of shape memory alloy (SMA) particles randomly interspersed throughout said adhesive base film for providing compression-after-impact strength to said adhesive base film; and
said SMA particles being provided in their austenitic phase; and
wherein a stress induced phase change characteristic of said SMA materials is used to provide said compression-after-impact strength.

15. (Previously presented) The adhesive film of claim 14, wherein said SMA particles comprise nickel-titanium alloy particles.

16. (Cancelled).

17. (Cancelled).

18. (Original) The adhesive film of claim 14, wherein said SMA particles comprise about 1.0% by volume of said adhesive base film.

19. (Original) The adhesive film of claim 14, wherein said SMA particles comprise between about 1.0% and about 50% by volume of said adhesive base film.

20. (Original) The adhesive film of claim 14, wherein said SMA particles comprise a shape in accordance with at least one of the group of shapes comprising: a sphere; an oval; and a cylinder.

21. (Original) The adhesive film of claim 14, wherein said SMA particles comprise a plurality of granules interspersed within said adhesive base film.

22. (Currently Amended) An adhesive paste comprising:
an adhesive compound having a consistency of a paste;
a plurality of SMA particles interspersed within said adhesive compound to provide compression-after-impact strength to said adhesive compound without negatively affecting an applicability of said compound to an external component; and
said SMA particles being provided in their austenitic phase; and
wherein a stress induced phase change property of said SMA particles is utilized to provide said compression-after-impact strength.

23. (Previously presented) The adhesive paste of claim 22, wherein said SMA particles comprise nickel-titanium alloy particles.

24. (Original) The adhesive paste of claim 22, wherein said SMA particles comprise a diameter of about 50 microns to about .005 microns.

25. (Cancelled).

26. (Cancelled).

27. (Original) The adhesive paste of claim 22, wherein said SMA particles comprise a shape of at least one of the group of shapes comprising: a sphere, a cylinder and an oval.

28. (Original) The adhesive paste of claim 22, wherein said SMA particles comprise at least about 1.0% by volume of said adhesive compound.

29. (Original) The adhesive paste of claim 22, wherein said SMA particles comprise between about 1.0% to about 50% by volume of said adhesive compound.